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## Worldwide Report

# TELECOMMUNICATIONS POLICY, RESEARCH, AND DEVELOPMENT

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31 March 1986

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**TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT**

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AUSTRALIA

CABINET TO CONSIDER SATELLITE TV FOR SOUTH PACIFIC

BK250930 Melbourne Overseas Service in English 0830 GMT 25 Feb 86

[Text] The Australian Broadcasting Corporation [ABC] has told the federal government it could start a satellite television service to the South Pacific for \$5-6 million. The estimate is given in a confidential submission provided to the Department of Communications.

A Radio Australia reporter in Canberra, Graham Dobell, says the ABC submission expressed strong interest in providing a satellite television service to the South Pacific, describing the idea as feasible in both technical and program terms.

The corporation said most of the material could be drawn from existing programs, but the service should have news programs with a special Pacific orientation. Dobell says that ABC said this could be provided by drawing on the network of correspondents in the region used by the ABC's overseas service--Radio Australia.

Our reporter says the ABC was asked for the report by the Communications Department which is helping prepare a submission for the cabinet. The submission is expected to go before cabinet at the end of March.

/9738

CSO: 5500/4327

EXPERT NOTES IMPORTANCE OF INFORMATION TECHNOLOGY

Hong Kong HONGKONG STANDARD (Supplement) in English 1 Feb 86 p 1

[Text] A LEADING figure in the local computer industry has called upon the Basic Law Drafting Committee to seek guarantees that after 1997 Hongkong will not be denied access to advanced information technology (IT) products, the supply of which is currently restricted to China and other communist countries.

Mr A.F.M. Conway, Corporate Marketing Manager of Communication Services Limited, was speaking at a meeting of the Hongkong Society of Publishers.

He said that Hongkong cannot exist in its present form without access to the latest in Information Technology products and services.

"For the vast majority of our IT systems we have had to obtain export licences from COCOM, the Coordinating Committee for Multilateral Export Controls," he said.

COCOM is a body of the OECD in that its multilateral policy and strategic technology exports controls are binding on the OECD member countries.

However, COCOM is comprised of Nato member countries minus Iceland and Spain but including Japan.

COCOM delegates agree on lists of goods that should not be exported to communist countries. It is then up to member nations to enforce COCOM's recommendations through their own trade laws.

"We have not been denied licences in the past and, in the main, receive them in a timely manner. Of course being a British colony has helped but

we abide by COCOM regulations and, with one or two exceptions, all licensed IT products have remained in Hongkong," Mr Conway said.

"However IT manufacturers do have difficulties when applying for licences for products which will be installed in China, and although we hear or read from time to time that COCOM is easing up, with nearly a thousand applications currently in process, we have yet to see the results of friendlier relationships between China and COCOM countries.

"Hongkong has a number of IT systems which hitherto have not been approved for installation in China, and in 1997 we will become a sovereign part of China.

"Recognising this I believe it is incumbent upon the Basic Law Drafting Committee to use every means at their disposal to obtain guarantees now that for the 50 years from 1997 Hongkong Special Administrative Region will have access to the most advanced IT products and services and that Britain and China make whatever guarantees COCOM requires to ensure this access.

"The time for these guarantees is in 1987, not 1997. Remember that by 1997 IT will be the largest industry in the world, and Hongkong will totally depend upon ready access to the most advanced IT products if we are to remain a leading business city, and we have a duty to future Hongkong generations to ensure that the Hongkong SAR is in the forefront of use of this technology to the benefit of our citizens." Mr Conway said."

/12851  
CSO: 5550/0090

## DATACRAFT HONGKONG INTRODUCES NEW HIGH-SPEED SYSTEM

Hong Kong HONGKONG STANDARD in English 30 Jan 86 p 3

**[Text]** Datacraft Hongkong, a leading supplier of advanced datacommunications equipment, has introduced a new high speed data PABX system that uses standard telephone wiring and connectors to network over 500 terminals and devices, simultaneously.

The Instantet 6000 Data PABX is manufactured by the US-based datacommunications giant, Micom, and forms the hub of an extremely cost-effective network. Terminals, personal computer and peripherals can be linked to make optimum use of resources and communicate at speeds of 19,200 bits per second, full duplex.

"Many buildings are already heavily prewired with telephone wiring, allowing the Instantet 6000 to be installed easily and quickly. The system is priced competitively so that even fairly low volume systems of 100 or so devices prove highly economical," explained Mr Kevin Slattery managing director of Datacraft.

Housed in a cabinet only 39½ inches tall the Instantet 6000 accommodates 504 channels in a single cabinet. This capacity can be upgraded to 1,015 channels by adding a second cabinet.

The Instantet 6000 is extremely friendly, users simply asking for resources by name, such as IBM VAXTWO or MRP. The connection request dialogue can be tailored by the system manager for each installation and may even be converted to different languages if required.

While the new data PABX provides for easy access, allowing any device to connect any other, system access and control features can be used to ensure security. Terminals can be assigned limited access to a specific device or number of devices and passwords can also be used.

The Instantet system is configured and controlled by a terminal connected to a dedicated Administration port. From there the network manager can define access rights of terminals, update network bulletins, forward messages and receive reports on attempted security violations.

A Statistics port complements the Admin port and provides time and date stamped audit trails of all network activity, including connections, disconnections and queue activity.

"Instantet 6000 is an extremely versatile system, economically priced, highly functional and ideally suited to conditions in Hongkong. Designed to meet present and future user needs the system can be quickly expanded or upgraded by with MICOM Featurepak ROM cartridges," Mr Slattery said.

Datacraft HK is a supplier of leading-edge technology solutions with a range of innovative and unique products for the fields of datacommunications, telecommunications and computer related systems and services. The company's Australian parent is also a leading manufacturer of datacommunications equipment.

/12851

CSO: 5550/0088

HONG KONG

HONG KONG TELEPHONE LINK BETWEEN PRC AND TAIWAN

Hong Kong SOUTH CHINA MORNING POST in English 25 Jan 86 p 8

[Text]

A high-ranking Taiwan telecommunications official acknowledged yesterday that foreigners in China could make telephone calls to Taiwan through Hongkong, Agence France Presse reported.

The official was speaking after an AFP correspondent in Beijing made a call to the agency's Taiwan office.

This confirmed an earlier *SCM Post* report that it was possible to make telephone calls from the mainland's Fujian province to Taiwan through the International Direct-Dialling system.

The *SCM Post* first reported last month that a three-minute phone call to Taipei from Xiamen costs 12 yuan (about HK\$33) with each additional minute at four yuan (about HK\$11).

However, telecommunications officials in Taiwan denied it was possible to connect calls from the mainland to Taiwan through Hongkong.

And Cable and Wireless (HK) Ltd had said there was neither an operating agreement nor a financial accounting arrangement between the relevant telecommunications authorities and the company for IDD transit telephone calls from Xiamen to Taipei via Hongkong.

The Taiwan telecommunications official said yesterday that the Beijing Government may have set up its own company in Hongkong to entertain calls from the mainland and connect them to Taiwan through the IDD system.

The official said Hongkong telecommunications officials would never have connected calls from China to Taiwan because there was an agreement between Taiwan and any other country or territory, including Hongkong, that calls from China should not be connected to Taiwan.

/12851  
CSO: 5550/0086

HONG KONG

BRIEFS

BUREAUFAX TO SHENZHEN--Cable and Wireless yesterday announced that since Feb 1 Shenzhen has become the fourth city in China which can be reached by Bureaufax, a high-speed facsimile service available to the public for telecopying documents overseas. The company said Bureaufax service had been extended to Beijing, Shanghai and Guangzhou last year. Document size acceptable for transmission to Shenzhen is the A4 size, at a cost of \$30 per page, the company added. [Text] [Hong Kong HONGKONG STANDARD (Supplement) in English 5 Feb 86 p 10] /12851

HONG KONG-MACAU LINK--Cable and Wireless Systems Ltd has set up a digital microwave communications link between Hongkong and Macau, fulfilling a contract worth US\$400,000. The customers were Companhia de Telecommunications de Macau and Cable and Wireless Hongkong. This alternative communications link is now operational from New Mercury House in Hongkong to Guia Hill in Macau via a repeater at Castle Peak in the New Territories. The system provides for the addition of television transmission as necessary. The hardware involves three eight ft and three 12 ft diameter antenna dishes supplied by Andrews of the US and receiving equipment supplied by Telettra of Italy. [Text] [Hong Kong HONGKONG STANDARD (Supplement) in English 5 Feb 86 p 1] /12851

DIGITAL'S NEW SYSTEMS--Digital Equipment Corp's new Far East marketing organisation introduced three new VAX computer systems and a new technical workstation yesterday. The new computers include the VAX 8800, Digital's most powerful system; two new mid-range systems, the VAX 8300 and VAX 8200; and the competitively-priced VAX station II/GPX, a micro VAX-II-based workstation featuring hardware-enhanced, high performance colour graphics. The new systems will support both the VMS and ULTRIX (Digital's UNIX) operating systems as all previous VAX computers and users have access to the more than 3,000 applications software programs and networking products. The new systems are part of Digital's ongoing evolution of its second generation of VAX systems initiated with the introduction of VAX 8600 a little over a year ago. Digital's VAX computers represent the industry's only fully compatible integrated and networked family of computer spanning the range from individual workstations to large systems. Commenting on the setting up of the new Far East marketing organisation, Digital's regional marketing manager Bob Schmitt said: "We are enthusiastic

about the opportunities we see in the Far East and our marketing group will focus on bringing leadership in integrated computing solution to our customers. He said the formation of the Hongkong-based marketing organisation is aimed at increasing Digital's share of the regional computer market. [Text] [Hong Kong HONGKONG STANDARD (Supplement) in English 3 Feb 86 p 3] /12851

CSO: 5550/0091

JAPAN

BRIEFS

NTT INVESTMENT PLAN--Tokyo, 28 Feb KYODO--Bunsei Sato, minister of posts and telecommunications, indicated Friday he will urge Nippon Telegraph and Telephone Corp (NTT) to increase its planned capital investment in its next business year starting April 1. Sato was commenting on NTT's capital investment plan submitted to the ministry Thursday. The plan proposes an investment of 1,600 billion yen, down 60 billion yen from the previous year. "NTT investment will have a great impact on Japan's overall economic activities. It may be necessary for NTT to expand its investment at a time when Japan is being requested (by foreign countries) to increase domestic demand," Sato said. [Text] [Tokyo KYODO in English 0436 GMT 28 Feb 86 OW]

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CSO: 5560/118

PEOPLE'S REPUBLIC OF CHINA

INTERNATIONAL COMPUTER CONGRESS PLANNED FOR BEIJING

Hong Kong SOUTH CHINA MORNING POST in English 24 Jan 86 p 4

[Text]

Well before the end of last year, a steering committee met in Beijing to plan for one of the most exciting symposiums allied with an exhibition of technology due to be held in China this year.

The International Congress for Computers and Communication (ICCC) will be staged in September in conjunction with a major display of communications technology, Intercomm '86.

Sponsoring the combined event is the China Computer Society, the president of which heads the organising committee of ICCC and the advisory board of Intercomm. Among the supporting organisations are the Society of Telecommunications (Ministry of Posts and Telecommunications) and the Society of Electronics (Ministry of Electronic Industries).

Topics for which papers will be called include three areas directly relating to telecommunication specialists: communications in computer networks; telecommunication network architecture and network capabilities, and network technologies.

The conference is noteworthy for another reason: It marks the first time

that a Chinese-produced magazine will be the official publication of a major international event in China.

The magazine, *Electronics in China*, a Chinese-language monthly journal, is the result of a joint venture publishing agreement between Business Press International (Reed Publishing, UK) and China Prospect Publishing House.

According to the magazine's publishers, the controlled distribution of 12,000 throughout China ensures the most qualified readership, which in turn should ensure a highly qualified and targeted audience for ICCC and Intercomm.

Behind this magazine, the foreign partner, Business Press International, publishes some 120 business, technical and specialist journals and directories in fields ranging from agriculture to electronics. Its sister company in the US, Cahners Publishing, puts out 32 journals in similar areas.

The Chinese partner, China Prospect Publishing House, is seen as a major force in China's vast publishing network. It issues journals and books in economics and marketing, industry, education and science for both domestic and foreign distribution.

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CSO: 5550/0087

PEOPLE'S REPUBLIC OF CHINA

DUTCH MINISTER REMARKS ON PRC TELECOM DEVELOPMENT

High Priority Given

Hong Kong HONGKONG STANDARD (Supplement) in English 30 Jan 86 p 1

[Text]

CHINA has earmarked telecommunications as a priority growth area and official estimates put a figure of \$24 billion to \$40 billion on the value of the market over the next five years, a foreign trade official said yesterday.

The Minister for Transport, Telecommunications and Public Works of the Netherlands, Mrs Smit-Kroes, was speaking at a press conference organised by Philips to launch the setting up of a new combined Telecommunication and Data Systems Division.

Mrs Smit Kroes told reporters that she had just returned from a visit to Beijing as part of an overseas trade delegation, and during the talks held there Prime Minister Zhao Zhiyang had assured her of China's continuing commitment to the development of its telecommunications infrastructure.

The current anxieties of firms dealing with China because of the problems relating to foreign exchange had been discussed, she said, but Mr Zhao had stressed that telecommunications development remained a high priority area for his government.

Supporting this optimistic view of trading prospects with the PRC, Mr R M Westerhof, general manager of the professional products division, Philips Hongkong, said that China was expected to invest heavily in its infrastructure this year, particularly in the field of telecommunications.

"To cater for this Philips TDS has set up special teams to offer the latest products, and orders for banking terminals, Automatic Teller Machines (ATM's) and mobile radio equipment have already been received," he said.

"We expect enormous growth in the number of banking terminal systems and ATM's in China in the coming few years, as the use of banking facilities, particularly as regards savings, increases," he said.

"We have developed a new system that will provide a stereotype for future automation in all the 40,000 bank branches in China," he said.

In a major project to develop ATMs that are suitable for China, Philips is co-operating with the Ministry of Electronic Industry.

The company has already signed contracts with the Bank of China to install 12 ATMs in Zhuhai by mid 1986, the first order ever taken in China for this type of equipment. It has also agreed to install banking terminals in branches of the Industrial and Commercial Bank and Agricultural Bank of China later this year.

## Effects of Decentralization

Hong Kong SOUTH CHINA MORNING POST (Supplement) in English 2 Feb 86 p 4

[Text]

THE decentralisation of telecommunication services in China has brought about a lot of business opportunities for overseas manufacturers, according to Mrs Neelie Smit-Kroes, the Dutch Minister of Transport and Public Works who met with Mr Zhao Ziyang during a three-day meeting in China.

Mrs Smit-Kroes who headed the Dutch delegation to China early in the week said that as far as telecommunications in China is concerned, the situation has unique features. The responsibility for telecommunications services lies with the Ministry of Post and Telecommunications in Beijing.

"However, a new policy has decentralised decision-making to city and provincial councils. This has brought the need for standardisation to the forefront of plans for the development of China's telecommunications network.

China, she said, has already bought a number of digital public exchanges for its main cities. At the same time, the country is importing a larger quantity of telecommunications equipment for the hotels and offices.

"There is a great need for radio and telephone equipment and we see an increased interest in technology transfer deals in the whole range of telecommunication into China."

According to Mrs Smit-Kroes who has been involved in the development of the telecommunications policy in the Netherlands for eight years, China is going to spend at least US\$3 billion in developing its telecommunications system this year.

She said the Dutch Government is negotiating a number of joint ventures in

China although the process is not moving as fast as expected. Mrs Smit-Kroes reckons the most significant changes in the worldwide telecommunications market is the liberalisation of telecommunications with the privatisation of the national Post, Telephone and Telegraph (PTT) organisations.

"These changes, which are taking place globally, started in the US and were subsequently adopted in some European countries as well as here in Hongkong," she said. "This trend can even be recognised in China."

"Telecommunications services have always been controlled by the central government of a country and organised within one organisation with a monopoly. "The first change came with the American Telephone and Telegraph which lost its monopoly on the telecommunications, telephone and telex services in the US. In return, the company was granted the right to compete overseas and market computer products.

"The first country in Europe to follow the liberalisation move was Britain. And we expect to liberalise the PTT services in the Netherlands by 1989. Many companies, and certainly telecommunications equipment suppliers in Hongkong, are looking forward to these changes."

Mrs Smit-Kroes said that both the telecommunication and computer organisations are co-operating more and more with each other today and in many circumstances are integrating their range of products. And as to the future of the worldwide telecommunications market, she reckons the liberalisation of telecommunications will continue and that most governments will see the merit in this trend.

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CSO: 5550/0089

PHILIPPINES

CARETAKER MANAGEMENT TEAMS TAKE OVER TV STATIONS

HK041136 Manila BUSINESS DAY in English 3 Mar 86 p 9

[Text] A caretaker management team took over RPN-9 [Radio Philippines Network], BBC-2 [Banahaw Broadcasting Corporation] and IBC-13 [expansion unknown] including all the radio and television stations in the provinces of the three networks last 1 March, the PHILIPPINES NEWS AGENCY reported last night.

The management team is composed of representatives of the existing management, the Ministry of Information and the Ministry of National Defense. The management team is tasked to take over and assume management control over the operations of the three major networks, the PNA said.

In a meeting yesterday, the broadcast city management committee announced that normal operations shall continue.

Agencies and advertisers including block time buyers are advised that payments to the three networks should be made directly to Broadcast City through Ignacio Santos, credit and collection manager. Payment should not be remitted or addressed to Aricor, Texcor and Ramar.

All suppliers holding checks from any of the three networks are advised to see the respective cashiers so proper replacement of these checks can be made. This applies only to Metro Manila suppliers, a press statement said.

/9738  
CSO: 5500/4326

PHILIPPINES

ARTICLE ON ANNIVERSARY OF NEWS AGENCY

BK280457 Manila PNA in English 0401 GMT 28 Feb 86

[Article by Al O. Labita Jr]

[Text] Manila, 28 Feb (PNA)--The PHILIPPINES NEWS AGENCY (PNA) marks its 13th anniversary on Saturday, 1 March, amid a pervading euphoria over the "people's power" that swept the country into a revolutionary government.

Employees who have distinguished themselves in their career and years of service will be awarded in an auspicious ceremony that coincides with the austerity program of President Corazon Aquino. Aquino, the Philippines' and Asia's first and only woman president, has called on the people for self-discipline in pursuit of her national reconstruction program.

The anniversary, the first under the Aquino Administration, will be highlighted by a mass to be officiated by Fr. Roberto Clemena, SVD.

The occasion unfolds at a time of surging tide for change in which the PNA, on stream since 1973, has not been found wanting in dynamism, innovations and vision.

A five-year development plan, initiated by Jose L. Pavia, general manager, has been conceptualized and is now being gradually pursued within the limits of available resources. The plan basically involves the professionalization of the PNA's manpower through skills acquisition and upgrading, technical capability, organizational build-up, and expansion of services. Rapport has been established with external agencies and organizations here and abroad to help the PNA realize its desire goals and objectives.

The UNESCO, for example, extended a grant to the PNA last year to finance the agency's manpower training program. The grant forms part of a package of assistance the UNESCO has committed to news agencies in the Third World for a new international information order.

The PNA's functional tie-up with the Organization of Asia-Pacific News Agencies (OANA) and the ASEAN News Exchange (ANEX) had likewise enabled it to broaden its editorial and technical capability and expertise.

The forward-looking five-year development plan--a first in the PNA--may also be construed as the agency's modernization thrust toward computerization of its communications setup. It dramatizes in more ways than one the PNA's conscious efforts to assert its identity as a major force to reckon with in the fields of mass communications and journalism.

Across the archipelago, the PNA boasts of a teleprinter network--another first in the history of Philippine journalism--linking the three principle islands of Luzon, Visayas and Mindanao.

The PNA coughs out an average of 80,000 words a day, bringing news to a long list of subscribers that include all major Manila dailies, 16 community newspapers, all 5 television networks, 3 radio networks, 2 news magazines, several provincial radio stations, 9 foreign news agencies, the U.S. Embassy and the Indian Embassy.

The backbone of the PNA is its domestic operations. As of February this year, 19 bureaus have been set up in strategically located major urban centers in the country.

A group of senior editors mans the Manila central news desk, sorting out and processing domestic, business and foreign news, and sports and features.

As the official news agency of the Republic of the Philippines, the PNA carries government-related news. Through its teleprinter network nationwide, national policies are instantaneously disseminated to the grassroots and feedback is gathered in the same manner.

/9738  
CSO: 5500/4326

PHILIPPINES

BRIEFS

RESTRUCTURING OF RADIO FREQUENCIES--The National Telecommunications Commission is currently undertaking a radio frequency management project to facilitate advance renewal of schedules for radio station licenses. The renewal of schedules covers, among others, the fixed and land mobile service stations which start on 1 February to 30 June, and the maritime aeronautical and amateur service stations on 1 July to 31 August. The project is aimed at rationalizing and restructuring the existing radio frequency sector. This will be done by establishing a computer-based information processing system for the national frequency master file. This master file will serve as a basis in the processing of renewal and applications for new licenses. [Text] [Quezon City Maharlika Broadcasting System in English 0300 GMT 20 Feb 86 HK] /9738

CSO: 5500/4326

## OTTAWA APPROVES SALE OF MITEL TO BRITISH TELECOM

Toronto THE TORONTO STAR in English 27 Feb 86 p E3

[Text]

OTTAWA (CP) — The federal government has approved the \$320 million sale of 51 per cent of the shares of Mitel Corp. of nearby Kanata to British Telecommunications PLC.

The deal was announced yesterday by Sinclair Stevens, the minister who reports to Parliament for Investment Canada — the agency that replaced the Foreign Investment Review Agency.

Stevens, in a brief news release, made no mention of terms of the sale. Mitel said when the British government approved the deal last week that a 51 per cent share purchase would mean the purchase of 40 million shares at a cost of \$320 million.

British consent was granted after an inquiry by the British Monopolies and Mergers Commission. It was given subject to several conditions protecting British manufacturers of telecommunications equipment.

Stevens said the deal will give financially troubled Mitel "much-needed financial resources" to continue developing and producing communications products in Canada. Manufacturing and research jobs will also be saved, he said.

Mitel has lost money for several years as sales of its telephone switching systems have lagged behind production in competitive world markets. Critics have blamed its troubles on imprudent expansion.

Mitel controls 25 per cent of the world market for computerized office telephone switches of less than 100 lines — known in the industry as PABXs. Financial problems have prevented it from seeking a larger market share.

Sales of its large SX-2000 switch, introduced in 1984, have not lived up to projections. A mid-sized SX-500 switch now is being developed for sale in British and European markets.

/9317

CSO: 5520/69

## SATELLITE OWNERS MOVE TO FILL UNUSED CHANNELS

Toronto THE GLOBE AND MAIL in English 1 Mar 86 pp B1, B3

[Article by Lawrence Surtees]

[Excerpts]

Like cars crowding an urban expressway, 25 U.S., Canadian and Mexican satellites share a narrow band of space 22,300 miles above the equator, receiving and transmitting millions of messages a day.

But, just as many rush hour cars carry only one or two passengers, many of the satellites are under-used, the result of over-ambitious planning by the eight North American satellite owners. However, the overcapacity may be shortlived.

Meanwhile, to stimulate demand, the owners have reduced prices, offered two-for-one deals, and granted special discounts to customers who can find new applications for the \$100-million investments.

Telesat Canada, which owns five of the satellites, has begun a program for experimental users that offers a 75 per cent discount on the normal \$75,000 to \$100,000 monthly rental fee for a full channel.

Two trials have been conducted so far:

The Saskatchewan Wheat Pool broadcast a series of nine cattle auctions to feedlot buyers in Ontario.

Newfoundland Telephone Co. Ltd. of St. John's and Spar Aerospace Ltd. of Toronto test-

ed a special earth station that can be used on offshore drilling platforms.

Eight more tests are expected to start in the near future.

The present overcapacity is not expected to last beyond 1987, however. The explosion that destroyed the space shuttle Challenger and this week's destruction of a Soviet satellite point to the hazards of the business. The expected delay of further satellite launches by the space shuttle because of the accident will also dry up surplus capacity.

The recent shakeout among U.S. domestic satellite carriers, because of mergers and acquisitions, was in marked contrast to the lineups at the launch pads three years ago, when the U.S. Federal Communications Commission ruled in 1983 that satellites could be spaced closer together, creating the orbiting traffic jam.

Placed in geostationary orbits by rockets and shuttles, the satellites rotate at the same speed as the Earth permitting ground-based antennas to remain fixed on them to distribute voice, data and video signals.

Many of the 25 are near the end of their eight-year life span,

which led to a turnaround of the current low business cycle. "Fewer replacement satellites will be launched because of soft demand, rising launch costs and extremely high insurance costs," said Eldon Thompson, president of Telesat.

He said the temporary halt of the shuttle program has already set back the launches that will be needed next year to replace inoperative satellites. And that will lead to a temporary shortage of satellite capacity.

The loss of more than \$600-million worth of satellites in the past two years has also led to increased insurance premiums that will force owners to charge higher rates to users of the next generation of satellites.

Mr. Thompson smarts, however, at negative portrayals of the current glut. In his view, Canada does not have more satellites than it needs.

He remembers when Telesat was "publicly castigated for having too little satellite capacity" six years ago. Based on the broadcasting industry's enthusiasm for satellites and the prospect of many pay-television and speciality program networks being licenced in the early 1980s, Telesat ordered the construction of five satellites: three Anik C and two Anik D satellites.

Communication satellites currently operate in two different frequency ranges. The more powerful Ku-band satellites, such as the Anik Cs, receive signals transmitted from large uplink antennas in the 14 gigahertz band and retransmit them to receiver dishes in the 12 GHz band. The less powerful C-band satellites, such as the Anik D family, receive 6 GHz signals and retransmit in the 4 GHz band.

The higher power of Anik C allows users to receive signals with much smaller dishes. This feature makes the Ku-band satellites ideal for broadcast users and others who want to send information direct-to-home.

Telesat's earlier demand forecasts were given a further boost when several U.S. customers signed contracts for the remaining spare capacity Telesat had in 1982. "We were held up and handicapped in that effort for many months," Mr. Thompson said. Although Telesat made \$18-million (U.S.) from temporary U.S. customers, he blames regulatory delays for the loss of an additional \$12-million in revenue.

As those U.S. customers headed back across the border, the expansionist period in the Canadian broadcast industry ended. And business applications of satellites remain in an infant state of development.

With one of the Anik Cs as a spare, Telesat has customers assigned to 73 of the available 104 channels.

Faced with a slump and a pre-tax loss of \$2.2-million in 1983, Telesat placed one of its Anik C satellites for sale in 1984.

For the year ended Dec. 31, 1984, Telesat had revenue of \$109.2-million, compared with \$88.1-million a year earlier. Profit after taxes and an annual settlement from the telephone company members of Telecom Canada was \$16.9-million, compared with \$13.2-million in 1983.

"There may be an over-all glut right now, but its nature varies greatly between the type of user and type of satellite," said industry watcher Berge Ayvazian, director of research and planning at Kalba Bowen Associates Inc. of Cambridge, Mass.

He said the market for the satellites that operate in the C band has matured. These satellites accounted for 408 working channels, compared to the 68 higher frequency and more expensive channels on the Ku-band satellites at the end of 1985.

Specialty cable services in the United States have become concentrated on three satellites. But further growth in the broadcast market arises from the potential of direct-to-home broadcasting. Telesat also "hopes to have a fling with direct broadcast satellites to generate more revenue," Mr. Thompson said.

Conventional broadcasters are also using satellites to gather and transmit news feeds to their stations more quickly; an application

that was not economical until recently, Mr. Ayvazian said. Telesat has marketed such services to Global Communications Ltd. of Toronto, and the Atlantic Television Network of Halifax has a fleet of vans equipped with satellite transmitting antennas.

Throughout North America, business applications have been slower to develop because of the wide variety of competitive land-based services offered by the telephone companies. "Telesat is not exactly sitting on a gold mine, but two policy changes have coincided with market conditions to make it more favorable to innovate," Mr. Thompson said.

First, a change last July now permits Telesat to retail its services directly to business users for the first time since its creation in 1969. Previously, it was "a carrier's carrier" and could only wholesale satellite channels for non-broadcast use to the telephone companies. Second, the federal Government will lift the restrictions on ownership of transmitting antennas in April.

Mr. Thompson's prognosis is one of cautious optimism, now that Telesat is free of the marketing yoke of the telephone companies. "We have to pick areas where satellites have advantages and can compete effectively against the telephone companies. I don't think there will be any great spurt of demand, but then no one has ever aggressively sold satellite networks in Canada."

/9317  
CSO: 5520/69

CANADA

MONITORING STATION TO RECEIVE FRENCH SATELLITE DATA

HK230525 Hong Kong AFP in English 0331 GMT 23 Feb 86

[Text]

Ottawa, Feb 22 (AFP) -- Canada is completing a data monitoring station which will shortly be able to receive information from the French earth observation satellite SPOT [Exploratory Satellite for Earth Observation], placed in orbit early Saturday, Mines Minister of State Robert Layton said here.

The station located in the La Gatineau Hills in Quebec near Ottawa and is to be inaugurated in mid-May.

This and a similar station in operation at Prince Albert in Saskatchewan, western Canada, will ensure reception of SPOT data for the whole of Canada and the United States, a ministerial statement said.

SPOT pictures of earth, which are three times more precise than those of the U.S. satellite Landsat, are expected to be widely used in Canada in map-making, geology and crop monitoring.

/9317  
CSO: 5520/69

CANADA

BRIEFS

SALES TO INDONESIA--International Trade Minister James Kelleher announced Friday that two Canadian companies will be selling \$40 million worth of goods to Indonesia for an ambitious coal and railway development project. A spokesman for Kelleher, on a two week trade mission to Southeast Asia, said the first deal involves the sale of \$36.5-million worth of telecommunications equipment and services from International Aerodio Ltd. The contract with the Richmond Hill firm includes the installation of equipment associated with the Bukit Asam coal-rail project and training Indonesian workers. The other deal involves the sale of telecommunications services and equipment by Lab-Volt Ltd. of Montreal, worth \$548,000 US. Earlier this week, Indonesian officials agreed to buy another \$54-million worth of Canadian goods. [Text] [Ottawa THE WEEKEND CITIZEN in English 15 Feb 86, p E7] /12851

GRANT TO SR TELECOM--SR Telecom Inc. of Montreal will receive a federal Department of Regional Industrial Expansion grant of almost \$2 million for the development of a new generation of subscriber radio telephone systems. The company exports about 80 percent of its output of existing lines of radio telephone systems. [Text] [Ottawa THE WEEKEND CITIZEN in English 15 Feb 86 p B7] /12851

CSO: 5520/67

BRAZIL

BRIEFS

PHONE EXCHANGES FROM SWEDEN--Ericsson's Brazilian subsidiary, Ericsson do Brasil, has in principle received the green light for a state Brazilian order of telephone exchanges valued at over 1.3 billion Swedish kronor. The large order to Ericsson has come after a political decision to prioritize the telephone industry. During 1986 the Telecommunications Ministry plans to invest 1.8 billion dollars in 1 million new telephone lines. Ericsson is the only Swedish firm which is listed on the stock exchange in Brazil. About 60 percent of the stocks are owned by Ericsson in Sweden, while over half the stocks with voting privileges are in Brazilian ownership. [Text] [Stockholm SVENSKA DAGBLADET in Swedish  
16 Jan 86 p 1] 12562/12624

CSO: 5500/2577

DOMINICA

BRIEFS

RESUMPTION OF LOCAL TV--Roseau, Dominica, Feb 25 (CANA)--The Dominica Government says it will commence limited local television programmes on a regular basis for the first time since its television services were destroyed by Hurricane David in 1979. The Government Information Service (GIS) says bi-weekly programmes of local interest will be aired on Tuesday and Thursday evenings, starting tonight, on a privately-owned cable television station. Before David's devastation, local news and programmes were presented regularly from a state-owned television station. A GIS release says it is hoped that this regular series will help alleviate the preponderance of foreign programmes picked up by satellite and relayed by the various companies operating in Dominica. The cable television station has been operating on 9 channels featuring mainly programmes from the United States interspersed occasionally by local programmes of national interest. Another local television station has been doing similar programming on another channel. The GIS says the production of local television programmes is limited at this time because of the high costs involved, but the government intends to alleviate this situation by introducing a television unit within the department. [Text] [Bridgetown CANA in English 2346 GMT 25 Feb 86 FL] /6091

CSO: 5540/046

GUYANA

GOVERNMENT CHARGED WITH CENSORSHIP OF PRESS, RADIO

Georgetown OPEN WORLD in English 20 Jan 86 p 4

[Editorial]

[Text] There is a reign of terror at Guyana Broadcasting Corporation. The recent dismissal of Mr Hugh Hamilton has left the staff in no doubt that the Corporation has no use for journalists.

It is a mad system that wants to decide for journalists what is and what is not news. If the ruling party has to intervene between the news and the listener as often as it does, then perhaps it does not need journalists at all. Cde So and So could very well do. Many of the staff may find that they are over-qualified. Since the dismissal of Mr Hamilton there has been a sharp drop of morale on the staff.

The cold-bloodedness of the policy is brought out by an interesting coincidence. Many announcers have had to read the news that Fr Connors was expelled for unstated reasons which GBC wanted the public to accept as valid reasons. Now a radio announcer is dismissed without a reason being announced, thus placing him, as far as the public is concerned, in the same boat as Fr Connors.

It is no secret that the government press and radio are subject to censorship by a ruling party that has a lot to hide and a lot that cannot be hidden. The PNC is conspiring not only to starve the people of essential foods, but of essential information as well. The PNC is an enemy of the whole person, body and mind.

As a section of the press, OPEN WORD condemns the dismissal of Hugh Hamilton as a high-handed act of power-crazy people. It calls on the authorities to save us from secret punishments and urges that formal protests be lodged.

/9317  
CSO: 5540/043

AFGHANISTAN

BRIEFS

COMMUNICATIONS GEAR INSTALLED--A telephoto system for the international transmitting and receiving of photos was recently put into use. This system, which is a grant-in-aid of the friendly Soviet Union, has been given by TASS to BIA. The system has been installed and assembled in the DRA Ministry of Communications by BIA technicians with the cooperation of Soviet experts. With the installation of this system, the newspapers and journals of the country no longer need photos of international events. Ground is thus prepared for transmitting photo information of events inside the country to abroad.  
[Text] [Kabul Domestic Service in Dari 1330 GMT 18 Feb 86 LD] /6662

CSO: 5500/4726

EGYPT

FINLAND TO BUILD PHONE NET WITH OWN AID FUNDS

Helsinki HELSINGIN SANOMAT in Finnish 23 Jan 86 p 7

[Article by Jussi Vuotila: "Nokia to Build 370 Million Markka Telephone Net for Egypt"]

[Text] Foreign Minister Paavo Vayrynen and Egypt's Assistant Prime Minister Kamal Ahmed al-Ganzuri agreed on Wednesday in Cairo to build a 370-million markka telephone network north of Cairo primarily with Finnish funds. The project is the largest private cooperative development objective of all time. The Finnish part of the expenses is altogether 325 million markkas of which 20 million is grant aid, 155 million development credit and 150 million export credit.

The project will be built by Nokia, which has been participating in its development for years. At present the project employs about 50 Finns, Nokia estimates.

Nokia has been ready to begin work for some time, but the Egyptian decision had been delayed until now. The delay could have been even longer without the push provided by Vayrynen's official visit.

During the next 4 years the telephone networks will consumer the lion's share of the development funds allocated by Finland for Egypt (in 1986 altogether 60 million and in 1987-88 about 70 million markkas). The development credit will, practically speaking, be used in its entirety and of the grant aid a quarter will be used first, and later a sixth.

In spite of its size the telephone project will not paralyze other cooperative development work in Egypt, because in earlier years plenty of development funds had been left unused due to lack of proper objectives. With them it is possible to fund, without any problem, the projects now under way and 10 more objectives that are in the planning stage.

Largest Objective

Measured in markkas the work obtained by Nokia is without doubt the largest private Finnish bilateral development project. To be sure, the comparison is weakened by the fact that the project, exceptionally, also utilizes export credit.

If only the cooperative development funds are used as a basis of comparison, the Nokia project takes second place in size. Number one is the Pha Rung dock work in Vietnam. It has received 190 million in development aid. The telephone network will use altogether 175 million in development funds.

In addition to these two giant projects, Finns have only a few development objectives costing somewhat over 100 million, most of them in Tanzania.

The telephone project is the first great cooperative development project utilizing mixed funding, i.e. development aid and commercial funding. These so-called mixed-fund projects have to meet development aid criteria. Finland is planning other mixed-fund projects in the near future, among others in China, Indonesia and Thailand.

The telephone network and 13 exchanges will be built by Nokia in the cities of Aussim and el-Khanka northeast and northwest of Cairo. The cities are practically speaking suburbs of Cairo with a combined population of about a million. In the initial phases, there will be only about 35,500 telephone subscribers.

Just before his flight to Kenya, the second destination of his African trip, Vayrynen reported that the work on the project will start immediately. The work will begin first in the Aussim area. It was not possible, however, to agree on all the details associated with the project during the meeting of Vayrynen and Ganzuri.

The agreement between Nokia and Egypt's telephone administration, Arento, will be signed during early spring, possibly in March.

While speaking to Ganzuri, Vayrynen also brought up the question of tariffs for lumber, which are clearly higher for Finnish than for other imports. According to Vayrynen, Ganzuri took a positive attitude toward the subject and promised to take it up for discussion with other ministers.

In spite of the unjust tariff treatment, the export of Finnish lumber here has fared so well that by the first half of last year Egypt was the most important export country for Finnish lumber.

In addition, during the last day of his 5-day visit, Vayrynen again negotiated with the Assistant Foreign Minister Butros Butros Ghali.

From Kenya, Vayrynen's entourage will continue its trip to Zimbabwe, where other Nordic ministers responsible for cooperative development work will meet next week to plan common enterprises to aid southern African countries.

12989/9435  
CSO: 5500/2578

INDIA

INDO-FRENCH WORKING GROUP IN INFORMATICS MEETS

Calcutta THE STATESMAN in English 21 Jan 86 p 9

[Text] New Delhi, Jan 20--France's willingness to collaborate with India in the field of electronics was voiced at a meeting of the Indo-French working group on electronics and informatics here today. "We are keen to share our technology with you," the leader of the French delegation, Mr C. Stoffiaes told the meeting.

The working group was set up following the signing in June 1983 of a protocol between India and France in electronics and informatics. The two-day meeting, which began today, is the third such meeting of the working group and is designed specifically to review the various projects already undertaken under the protocol.

Mr Stoffiaes noted that his country was progressively modifying its technology and developing new ones to suit the changing economic and industrial needs and France would be glad to transfer all such technology to India. It would also be happy to increase the number of projects under the protocol.

Mr S.R. Vijayakar, Secretary in the Department of Electronics, said the areas selected for such projects should be ones where an effective impact was possible in relation to this country's requirements. "Also, the strengths and needs of the two countries in this entire field should be first identified and any project undertaken has to be in relation to our mutual needs."

The chairman of the Electronics Commission, Dr M.S. Sajeevi Ilao who presided, wondered why speedier progress could not be made in the projects launched already under the protocol. He noted that the Indo-U.S. programme in the field of electronics had made spectacular progress. "I do not see any reason why we cannot make similar progress in the programme of Indo-French cooperation also." He requested the members of the working group to see how the best progress could be achieved.

Dr N. Seshagiri, additional secretary in the Department of Electronics, emphasized that the transfer of technology from France to India was open and faced no constraints whatever.

He attributed this to the very similar political and economic setup in the two countries. He, however, agreed that the implementation of the projects undertaken under the protocol required to be speeded up.

He suggested that with the Department of Electronics having laid down the guidelines for cooperation it would certainly be better if discussions between entrepreneurs seeking technology or transferring it were to take place "autonomously" with the Government associated with the process at the final stage. "It should not be that everything has to be come through the Government," he added.

Dr Seshagiri also presented a kind of progress report on the various projects undertaken under the protocol. These are in three broad fields: computer hardware, software and networks; instrumentation; and components. His report was that, except for one project which he felt may have to be abandoned, the majority had made commendable progress and that problems, if any, might be sorted out at the present meeting.

/9317  
CSO: 5550/0092

## ITI CHAIRMAN TELLS PLANS FOR IMPROVEMENTS

Calcutta THE TELEGRAPH in English 23 Jan 86 p 6

[Text]

**Calcutta, Jan. 22:** Indian Telephones Industries Limited (ITI) is expected to set up a third unit to manufacture switching systems towards the end of the Seventh Plan. The unit will probably use the C-DoT technology, which is being indigenously developed at the Centre for Development of Telematics. The company has not yet decided on the location of the proposed unit, according to Mr K.P. Nambiar, chairman and managing director of ITI.

ITI has entered into an agreement with CiT-Alcatel Thomson of France for the manufacture of digital electronic switching systems (ESSs) of 500,000 lines per year for direct exchange units at its Mankapur unit and 30,000 lines per year for trunk automatic exchanges at its Palghat unit. A similar ESS facility to manufacture 500,000 additional lines will be established at the Bangalore unit very shortly by phasing out the crossbar exchange manufacturing programme within two years. The Mankapur facility is nearing completion, Mr Nambiar told newsmen here today. By 1989-90, ITI will be manufacturing one million lines per annum, he added.

Mr Nambiar said ITI needs an investment of Rs 610 crores in the Seventh Plan for diversification, technology upgradation and expansion. The Central government had approved a total

capital outlay of Rs 335 crores in the Plan period. The balance Rs 217 crores will be raised in the form of share capital and loans from the government, by issuing bonds and through internal generation etc.

ITI is entering the capital market on February 3 with an issue of 10 lakh 14 per cent redeemable non-convertible bonds (A series) of Rs 1,000 each for cash at par, totalling Rs 100 crores. Five lakh bonds are reserved for private placement with UTI, LIC and GIC. The remaining 50 per cent are being offered for public subscription.

Mr Nambiar said the company might go in for a further bond issue of Rs 100 crores, perhaps even next year. In the event of the present issue being oversubscribed, the company intends to retain 50 per cent or a higher sum depending on the permission of the controller of capital issues. The bonds will be redeemable on the expiry of seven years from the date of allotment. ITI is the first public sector company to enter the capital market. This follows the government's policy to allow the telecommunications industry to seek public participation.

ITI has also entered into an agreement with foreign companies in other fields as well. It has tied up with Industrie FACE Standard of Italy in the area of

telephone instruments technology. ITI will manufacture 500,000 rotary and 500,000 electronic push button type telephones at the company's Bangalore and Naini units.

For the manufacture of transmission equipment, ITI has entered into technical collaboration with Kokusai Electric Company of Japan for the production of multi-access rural radio systems to enable expansion of rural communication.

Mr Nambiar said the company is considering the possibility of exporting to Vietnam and perhaps to neighbouring countries. In 1984-85, ITI earned a profit before tax of Rs 26.16 crores compared to Rs 20.76 crores in the previous year. Sales, including services, rose from Rs 212.11 crores in 1983-84 to Rs 236.93 crores in 1984-85.

Asked why the bonds were not being listed at the Calcutta stock

exchange, Mr Nambiar said this would be done "immediately". He refuted charges that ITI attached low priority to Calcutta. He mentioned some "error" and "formality" to explain why the prospectus did not contain Calcutta as one of the stock exchanges where the bonds would be listed.

Mr Nambiar said ITI is playing an important role in speeding up surface transportation in Calcutta by supplying the entire signalling and train control equipment for the Metro Railway. ITI has also supplied and installed road traffic signalling equipment in various parts of the city. The micro-processor-based system was developed at the ITI's R & D centre.

The company is also negotiating with the Andaman and Nicobar Islands administration for establishing a traffic control system at Port Blair.

/9317  
CSO: 5550/0093

PROJECT TO MANUFACTURE MICROPROCESSORS APPROVED

Calcutta THE TELEGRAPH in English 21 Jan 86 p 6

[Text]

Madras, Jan. 20 (PTI): The Centre has approved a Rs 2 crore project for manufacturing microprocessors and super micro computers, with headquarters here.

The Tamil Nadu industries minister, Mr K. Rajaram, today said that the state owned Electronics Corporation of Tamil Nadu's joint venture company, Infotech would set up the project in collaboration with Stride Micro of the USA was likely to begin production by the end of this year. The company would serve as a turnkey system supplier providing not only hardware but also comprehensive software, training and installation support to its clients. It would manufacture 'motorola 68000 and 68020 micro processors' and 'VME BUS based super micro computers.'

The company's manufacturing unit would be located at the State Industries Promotion Cor-

poration of Tamil Nadu (SIPCOT) industries complex at Gummidi poondi in north of Madras. It would give direct employment to 300 computer professionals and engineers, Mr Rajaram said.

The minister also informed that a modern electronic push button telephone manufacturing plant, being set up at suburban Nandambakkam, is to begin commercial production by September or October this year.

A joint venture company, Telematics Systems Limited, has set up a Rs 4.65 crore project, in technical collaboration with Siemens, Germany. The installed capacity of the plant would be five lakh telephone instruments both of "decadic and DTMF versions."

Mr Rajaram said that the initial equity participation by the state government through Electronics Corporation of Tamil Nadu would be Rs 37.70 lakhs.

/9317  
CSO: 5550/0095

## INDIA READY TO UTILIZE FIBER OPTICS

Madras THE HINDU in English 12 Feb 86 p 17

[Text]

India is now poised to make use of fibre-optics, the new technology of transmitting information with beams of light.

Over 22 research institutions in the country are working on various aspects of materials and systems for optical communication such as drawing of low-loss optical fibres, splicing and connecting techniques, modulation and demodulation techniques, multiplexing and de-multiplexing techniques and system studies.

The Telecommunication Research Centre in Delhi has developed a terminal equipment for a 120-telephone channel system while the Indian Institute of Technology in New Delhi has a facility for testing fibres and engaged in perfecting already existing measurement techniques and trying to develop new methods to characterise fibres (pulse dispersion, attenuation, refractive index profile measurement).

The Central Electronics Engineering Research Institute at Pilani has developed silicon avalanche diodes for detecting and decoding laser pulse at the receiving end, while the Instruments Research and Development Establishment in Dehra Dun and the Central Scientific Instruments Organisation in Chandigarh have developed a variety of fibre-optic components for Defence. Besides, a variety of fibre-optic components developed for various applications are: light guides of different lengths and aperture, aligned flexible fibre bundles used in sigmoidoscope, fibrescope and traffic signs; solid fused bundles or face plates.

The Defence Solid State Physics Laboratory in Delhi has succeeded in fabricating the gallium — arsenide lasers, while the CSIO is de-

veloping a machine for drawing plastic coated silica fibre. A more sophisticated facility at the Central Glass and Ceramic Research Institute in Calcutta has already produced experimental quantities of 'graded-index' multimode fibres.

Research and development and measurement techniques related to characterisation and evaluation of communication grade fibre are being done at the Indian Institute of Technology, Delhi, and the Central Scientific Instrument Organisation in Chandigarh. These institutes are capable of performing well-identified and complementary tasks if they are assigned to them in a coordinated manner. Other IITs are also in the process of setting up similar facilities.

Research in the field of launching optical signals and detection of signals with imported sources is going on in several other institutions. Work is being done on terminal circuitries for converting sources detectors into different systems-required-transmitters/ receivers and also repeater stations.

The IIT, Kharagpur, has recently started an M.Tech course covering technology of optical fibre communication systems with its associated devices, materials and components to meet the manpower requirement. Courses on optical communication are also being given at some of the other IITs, the Indian Institute of Sciences, and some other universities.

The first optical fibre communication system was set up in Pune connecting Shivaji Nagar and Cantonment Exchanges. Buried two metres underground, the glassfibre of 8 Mb/s capacity imported from Japan provides 120 telephone channels and has been functioning without any fault since 1979. — P.T.I. Science Service

/9317  
CSO: 5550/0094

## BRIEFS

SAIL COMMUNICATIONS NET--Madras, February 9--The Steel Authority of India Limited (SAIL) is going in for a "Steelnet," hailed as an exotic medium of communication unaffected by breakdowns and weather changes. Using the INSAT 1-B satellite, the new system will bring together all public sector steel works within a communication network. It is expected to become operational in about 15 months. It will be for the first time that a commercial enterprise will be using INSAT 1-B facility. To be implemented in three stages, Steelnet will provide four types of communication facsimile transmission and data transmission through satellite terminals for establishing direct links between the corporate office at New Delhi and steel plants at Bhilai, Bokaro, Durgapur, Alloy steel plant at Rourkela, Burnpur, Salem and the central marketing organisation at Calcutta. Steelnet is expected to prove its worth in the export field where it will enable the Indian steel industry to match the "electronic speed" with which international markets operate, thus facilitating quick reaction to international inquiries. The network will eventually include a series of earth stations linked to the satellite and together with other ground communication systems will use microwave/VHF/fibre optic cable transmission services, leading to quicker exchange of information between producer-seller and the user and faster decision making. At present, the Oil and Natural Gas Commission and the Post and Telegraphs use the satellite for voice and data transmission. Initially, SAIL will use the P&T earth stations to achieve better communication between stockyard and shipping by linking offices of SAIL in ten important cities with the corporate office. There will be a provision for teleconference, thus rendering travel by executive unnecessary. [Excerpts] [Bombay THE TIMES OF INDIA in English 10 Feb 86 p 1] /9317

FIBER OPTICS USE--Bombay, February 2--For the first time in the country, the latest in communication system technology involving the use of fibre-optics has been incorporated to facilitate faster and better transmission of data. This system has been installed along the 160 km pipeline of the Hindustan Petroleum Corporation Limited (HPCL) which was commissioned yesterday at Loni near Pune. The communication cable system comprises four fibre-glass strands along with six copper conductors, and will provide 1,920 channels of communication simultaneously. It will monitor various operations along the entire length of the pipeline. The pipeline, which will replace transportation of petroleum products by rail and road, starts from the HPCO refinery in Trombay and goes through the western ghats to end at Lone, 18 km from Pune. [Text] [Bombay THE TIMES OF INDIA in English 3 Feb 86 p 6] /9317

CSO: 5550/0096

IRAN

BRIEFS

NEW SATELLITE STATION--Due to the efforts of the personnel of the television transmitter units of the Voice and Vision of Islamic Republic of Iran in Bushehr, the third satellite station named (Shhid Nazar Tarmideh) station in (Dehrud-e Poshteko) started operation recently. According to a Central News Unit report, this 10-watter transmitter will enable the residents of (Dehrud-e Sofla), (Parchonak), and [name indistinct] to receive the programs of the first network of the Vision of the Islamic Republic of Iran on Channel 10. [Text] [Bushehr Domestic Service in Persian 1330 GMT 23 Feb 86 GF] /6662

CSO: 5500/4725

SAUDI ARABIA

ARABSAT DIRECTOR ON ARABSAT-1 PROBLEMS, ARABSAT-2 PROGRESS

GF162008 Riyadh AL-RIYAD in Arabic 15 Feb 86 pp 1, 19

[Article by 'abd al-Muhsin al-Murshid]

[Text] The status of the first Arab satellite, Arabsat-1, is still not clear, because the equipment that guides the satellite is malfunctioning. The satellite is now being operated manually in an attempt to improve the situation. An emergency plan is expected to be drawn up to improve the satellite's position. The continuation of some of the tests that are being carried out to repair the present fault could pose a risk to the satellite itself.

Contacts between the Arab Satellite Communications Organization [Arabsat] and the insurance company that insured the Arab satellite are continuing so that the company will pay for the fault. There is a provision that the Arab satellite has to be positioned in a good orbit within a specific period after launching, and Arabsat-1 has not yet reached that position.

In a statement to AL-RIYAD, Faysal Zaydan, under secretary at the [Saudi] Ministry of Posts, Telephones, and Telegraph and Arabsat director, has said the status of the first Arab satellite is still not clear, because there has been a malfunction in some of the equipment and it is being operated manually. The manual method cannot be guaranteed and a future emergency plan will be drawn up to deal with the situation.

Arabsat-2, whose launching was supervised by Prince Sultan ibn Salman ibn 'abd al-'aziz, is operating satisfactorily. It was first operated during the 1985 pilgrimage season when it was used to transmit the pilgrimage rites. It is now being used for communications among the Arab countries. There are now 10 Arab ground stations for the satellite for both communications and the exchange of television broadcasts. Saudi Arabia is the first country to use it to enhance its domestic communications.

Faysal Zaydan said that tests on the orbit of Arabsat-1 have not been completed because they may pose a risk to the satellite, and therefore Arabsat is waiting for an emergency plan which the manufacturing company is expected to draw up.

Answering a question on claiming financial compensation from the insurance company, Zaydan said that there are certain provisions in the insurance contract, such as that within 181 days of launching the satellite has to be positioned in a defined orbit and with defined specifications, and this has not been achieved. Arabsat is still discussing the matter with the insurance company.

/12858

CSO: 5500/4501

SUDAN

BRIEFS

TRANSMISSION STATION--Dunqulah, Sudan, 9 February (SUNA)--The Department of Planning and Projects at the National Radio and Television Commission the day before yesterday took over the radio transmission station constructed in the Shaykh Sharif area in the norther region 8 km from the city of Dunqulah. The station, which was constructed with aid from the Japanese Government, will broadcast experimentally for 6 hours daily. [Text] [Khartoum SUNA in Arabic 1423 GMT 9 Feb 86 NJ] /12232

CSO: 5500/4616

## SOUTH AFRICA

### RADIO MOSCOW SERVICE IN AFRIKAANS AIMED AT WHITES

Johannesburg THE STAR in English 5 Mar 86 p 8

[Article by Neil Lurssen]

[Text]

WASHINGTON — The South African Broadcasting Corporation is not the only radio service to broadcast in Afrikaans.

Now, Radio Moscow has its own Afrikaans service and, not surprisingly, it is aimed at whites in South Africa.

While the broadcasts on Moscow's Afrikaans service are not the kind that would find favour at Auckland Park, they are, by Soviet standards, surprisingly free of the mind-numbing sloganeering that Russian radio commentators find so appealing.

#### VERBIAGE

In the Soviet media, which is monitored daily in Washington, it is rare that references are made to, say, the South African Government without the adjectives "fascist" or "racist" or at the very least "supremacist." A favourite term is "ruling clique".

But in Moscow's Afrikaans broadcasts, much of the verbiage is discarded and the word "government" is used without decoration. Instead of the customary "oppressed masses", the phrase "black South Africans" is used.

The intention clearly is to avoid alarming Afrikaans-speaking whites so much that they will switch off.

In a recent broadcast Soviet commentator Aleksander Fedorov admitted he got most of his material from Radio South Africa itself.

But Comrade Fedorov reported he has not been getting good service from the SABC.

He complained he had not been able to get hot commentary on issues out of Johannesburg recently and ... "so I am unable to get accurate information on the situation inside the country. My aim is to get the views of whites on events in South Africa."

But having informed his listeners that he depended on Auckland Park for accurate information, he then went on to say South Africans were not told what was happening.

"Nevertheless even people who are not told the facts can learn from their own history and that of other nations," he said.

The lessons of history for white South Africans, Mr. Fedorov suggested, were that the Nazis failed to make slaves of millions of people in World War 2 and that 90 liberated nations, 50 of them in Africa, were once colonies.

"Forecasts are now being made in South Africa," Mr. Fedorov said. "Some say there could be a black government there by the year 2000."

Moscow Radio broadcasts to Southern Africa in other languages too, notably Zulu.

/9317

CSO: 5500/52

USSR

VOA STATION IN NEGEV SAID U.S. 'PSYCHOLOGICAL WARFARE' WEAPON

TA081500 Moscow Radio Peace and Progress in Hebrew 1730 GMT 7 Feb 86

[Unattributed commentary]

[Text] Official sources in Israel have announced that the infrastructure work for the installation of the VOA relay transmitters has begun in the 'Arava. The area has been plotted and a decision was made on the transfer of equipment for the earthwork.

The impression is that the master of psychological warfare beyond the ocean, and the enemies of the socialist countries, have all the reasons to be happy. Here, one of the most ingrained visions of the political top echelon in Washington, to put Israel at the forefront of the anti-Soviet campaign, is coming true. It is easy to understand what Washington stands to gain from this. After all, if Israel makes a greater contribution to the anti-Soviet (?salute) of imperialism this will strengthen its strategic alliance with the United States. Another reason, no less important, is that if Israel joins the U.S. anti-Soviet campaign at such a level this will eliminate any chances for improving its relations with the socialist countries.

Washington needs this to make sure that Israel continues to serve the United States in the future as well, and that it conducts an aggressive policy to bolster U.S. interests in the Middle East.

Official circles in the United States wishing to install relay transmitters of anti-Soviet propaganda in Israel and to incorporate Israel in the psychological war understand very well that these moves will not only have an adverse effect on the Soviet Union, but will also harm the entire complex of relations among the countries. It seems that the Israeli top echelon also realizes this. However, if this is the case, it means that there is not even a trace of truth to the recent statements made by Israeli Cabinet ministers to the effect that they want to renew diplomatic relations with the Soviet Union and to improve relations with the socialist countries as a whole.

That is to say, the words and the needs do not go hand in hand. It is a regrettable fact that the (?supporters of the transmitters) in Israel are

being dragged about by the extremist anti-Soviet circles in Washington who hate anything related to the Soviet Union, both its socialist regime, our economic system, and the support extended to liberation movements throughout the world by the socialist countries.

Those serious Israelis who believe that the Cabinet's decision, to use the U.S. relay transmitters to expand anti-Soviet propaganda, will drag Israel into the ideological struggle between socialism and the imperialist West, along with the extreme right in the United States, are absolutely correct. Through this move, Israel demonstrates loyalty to the unfit [word indistinct] concepts which are aimed at undermining the socialist regime.

Israeli decisionmakers however, should not forget that the psychological warfare that has been waged against the Soviet people by the imperialist circles has never borne any significant results, except perhaps for deteriorating the international situation and exacerbating the tension. Those who wanted, and still want, to mislead the Soviet public and to sow doubts about the supremacy of the socialist regime eventually suffer a devastating failure.

The same fate awaits the new followers of the anti-Soviet propagandists who are trying to distort the nature of Soviet policy.

/6662

CSO: 4423/88

RACE PROJECT SEEN VITAL FOR EUROPEAN INDUSTRY

Amsterdam DE VOLSKRANT in Dutch 27 Jan 86 p 2

[Article by our correspondent Michèle De Waard: "Without RACE Europe Will Decline into Another Africa.' Philips--Uniformity in Telecommunications a Must"]

[Text] Eindhoven--"The situation in the telecommunications sector in Europe has become untenable. Firms have too small a domestic market, and that makes the price of equipment too high. Without government subsidies most firms do not have a chance. It cannot go on like that. That is why the RACE telecommunications project is an absolute necessity."

Dr. N. Hazewindus, head of the Product Development Coordination Office at Philips International leaves no doubt about it. RACE has to be a success. Otherwise the European telecommunications industry can just forget about the future.

RACE, which has just begun, stands for Research for Advanced Communications Technologies for Europe. It is an ambitious plan by the large European electronics firms, the PTT's [Post, Telegraph, Telephone], and the European Commission to create a supermodern, uniform telecommunications network throughout Europe.

It is to be complete by 1995. By then all of Europe is to be covered by a single large network of glass fiber cable, which is also referred to as a broad band communications network. With its large capacity, glass fiber cable not only can carry many more telephone conversations at the same time but also can carry all kinds of other communications, such as cable television, picture telephone, computers, video text, and videotheques.

A narrow band network like the current telephone network is not suitable for that. Some countries like France and the Netherlands are already laying this kind of glass cable network. Cooperation is required, however, to see to it that the cables can be linked up with one another throughout Europe. In this way it will be possible to prevent it from coming about that in a few years each European country will have developed its own system, which cannot be used in other countries.

This problem has already appeared with the car telephone, which cannot be used outside the Netherlands. A silly situation, and in an era known as the Information Age at that.

With RACE the large European electronics firms and the European Commission want to see to it that a single uniform broad band telephone network is built in Europe and thus to prevent random growth, says Hazewindus, who is closely involved with RACE for Philips. The most revolutionary communications

technologies will be appearing shortly. It is, Hazewindus says, a must for governments and for business in particular that it be possible to communicate with the new data processing equipment throughout all of Europe.

RACE is just beginning now. The first research phase recently started and is to be completed by the end of this year. This will cost 100 million guilders. In the long run RACE will cost many tens of billions of guilders for laying glass fiber cables and building new digital telephone exchanges.

These initial research costs are being paid for by the European electronics industry, the national PTT's, and the European Community. As RACE progresses, the various governments will be called upon to contribute.

Netherlands participants in RACE are AKZO, Océ-van der Grinten, and Delft Technical University. But Philips and the Netherlands-American telecommunications enterprise AT&T/Philips Telecommunications in Hilversum are far and away the most closely involved in RACE.

Hazewindus says that RACE is of crucial importance to Europe. "The future of the European telecommunications industry is at stake," he says. His worry seems misplaced at first glance. Telecommunications is one of the few high-tech industries in which Europe is doing well for itself.

European firms have more than 30 percent of the world market for telecommunications equipment, which is worth a good \$80 billion. And in contrast to the large deficits in the balance of trade in computers and microchips, last year the EC countries had a positive balance of \$2 billion in telecommunications equipment.

But appearances are deceiving. The advantages, Hazewindus says, do not compare to the European telecommunications industry's handicaps. What are these? Hazewindus: "The telecommunications market in Europe is totally closed. In the various countries the PTT's play a decisive role. They only work with the national champion, which supplies the necessary equipment. The domestic market is totally protected to keep out competition. This maintains monopolies, which does not exactly inspire further innovation."

The problem is that these firms' domestic market is much too small to permit them to operate competitively, Hazewindus says. It is not possible even to earn back development costs. European industry thus cannot sell its products at world market prices. The result is that the prices are higher than those of the American or Japanese competitors. It is only because the European governments come up with subsidies that the industry stays afloat. "One day that will stop of course," Hazewindus says. "The current situation simply cannot be sustained any longer."

If this policy is not altered, in a few years' time Europe will find itself with a jungle of incompatible communications systems. Furthermore, each of the nine telecommunications firms in Europe is currently being compelled to invest heavily in developing new technologies, which calls for large sums of money.

Thus economic motives are an important incentive for the electronics firms to sign on with RACE. At least they can then reduce research costs.

Hazewindus says that cooperation is all the more urgent since the European telecommunications industry is having a hard time of it in the tougher and tougher competition with powerful American and Japanese rivals like ITT and NEC. Worldwide, production of telecommunications equipment exceeds demand.

A big shake out in the telecommunications industry is inevitable. In Europe especially, where nine firms are getting in each other's way. In this regard the competitors in Japan and the United States enjoy the advantage of a large and fast-growing domestic market.

Moreover the arrival of a new, aggressive competitor on the European market has turned up the heat even further. IBM, the most important supplier of computers in the United States and Europe, has let it be known that it wants to double its market share in the telecommunications sector in Europe in 5 years. The European industry received this news with fear and trembling.

That is certainly so since the computer is beginning to play a central role in telecommunications. Knowledge of the most modern computer and chip technology is an absolute necessity for European telecommunications firms. But that is precisely where Europe is hopelessly behind.

The grim prospect of the American computer giant trying to force its way into the already too crowded European telecommunications market breathed new life into the "pan-European" idea. Thus General Electric Company and Plessey in Britain, Compagnie Generale d'Electricité in France, and Italtel/Telettra in Italy are trying to cooperate. Philips sought cooperation abroad in the alliance with AT&T. Siemens and Ericsson appear to be the only firms in Europe in a position to operate from a position of strength internationally.

According to Hazewindus it is up RACE to give the European telecommunications industry its "great leap forward." "Once the glass fiber cable has been laid in Europe, the industry can go ahead and supply standard equipment for it. In this way the European industry will acquire a much larger domestic market."

It sounds good, but the greatest obstacle still lies ahead: politics. When the RACE research phase has been completed, the EC countries will have to climb into the ring with one another in order to reach an agreement on it. "That is the most ticklish question," Hazewindus admits.

But the EC has to stay the course with RACE, he thinks. "RACE is not only necessary for the survival of the European telecommunications industry. Creating this new infrastructure is simply a MUST [emphasized in original] for Europe. RACE is THE network which will make possible the most modern forms of communications. If you do not have that kind of system, then in the long run you will turn into another Africa."

12593  
CSO: 5500/2590

FINLAND

PRIVATE FIRM ENTRY INTO DATA TRANSFER FIELD ENDS MONOPOLY

Helsinki UUSI SUOMI in Finnish 10 Oct 85 p 2

[Editorial: "Private Data Net Being Built"]

[Text] A company supported by private telephone firms has gotten its foot in the door of the national telephone network controlled until now by the telephone administration. A company called Datatie has already created its own data transfer net between southern Finnish cities. The private sector is of course interested in the exploding of an even larger bomb--the penetration of the radio-telephone sector controlled by Postitele.

The general manager of Datatie, Jarmo Kalm, tells how the company's own data transfer net already connects Helsinki, Tampere, Hameenlinna, Forssa, Loimaa, Vammala and Lahti. Turku is also being added to the data net.

A private company, however, cannot, in its own net, transmit calls from one end of the nation to another--that is the monopoly of the telecenter--but on the other hand the old legislation knows nothing about the transfer of mere data messages.

This hole in the fence has now been used successfully by the private sector to its own advantage.

Datatie consists, among others, of the telephone companies of 13 south Finnish cities; the nation's commercial banks; Sanoma Inc; Tampereen Kirjapaino Inc, which publishes AAMULEHTI; plus TURUN SANOMAT.

Competitive Rates

Extensive users of Datatie have already long been complaining about Postitele overcharging for its services, since no real alternative exists.

"And in this spirit our prices are certainly competitive," Kalm ventures to say.

## Radiophone Relay Under Discussion

The private sector has, as far as is known, been interested in expanding its telephone services also with its own radio telephone network.

The Postitele NMT-Net, excellent as it is, has appeared to be congested in larger cities and for this reason certain circles have put forth the idea of private radio telephone nets functioning in restricted areas. This, in turn, requires the permission of officials.

This and other telefunctions now fermenting will be clarified through new legislation. The government proposal of a new telelegislation is expected already at the end of the present month.

12989/9435  
CSO: 5500/2578

ITALY

STET, FIAT FORM TELECOMMUNICATIONS FIRM

Turin MEDIA DUEMILA in Italian No 11, Dec 85 pp 106-107

[Article by r.m.d.: "STET, Fiat Alliance Aims Toward Europe"]

[Text] The marriage between STET [Telephone Finance Corporation] and Fiat in the telecommunications field caught operators and observers unaware. Around the middle of November the struggle for control of Mediobanca developed on the front pages of the newspapers. No hint appeared about an operation started by Mr Agnelli and Mr Prodi, who aimed to shuffle cards in one of the strategic sectors of Italian industry.

However, the wedding between public and private--Italtel and Telettra--was made official. The sudden pickup, after many months of slow motion negotiations, was taken at IRI [Industrial Reconstruction Institute] and Fiat summits; thus, on 13 November, the Board of Directors gave its approval to setting up the new company. Thus, a maxigroup was born with the task of controlling about 70 percent of digital and transmissions technologies in our country.

We must go back to 1982 in order to understand the deep reasons for the change which is destined to also affect the European field, where new alliances are imminent. When the "national pole" was born 3 years ago after the Italtel, Telettra and GTE agreement, a first decisive step was made toward the rationalization of a sector in which only giants can hold out at international levels.

An efficient technological cooperation developed through the "pole" which allowed the building of the first electronic public commutation system. On the commercial level the results were less brilliant while the three companies continued to operate separately.

Nevertheless, since 1982 close talks took shape to verify the concrete possibilities of a more organic alliance. Afterwards, however, these projects were shelved. STET seemed to be more interested in organic alliances with the leaders of the worldwide market, AT&T and IBM. It was a complex strategy which led only to an operational outlet: the IBM-Elsag company for the automated factory.

The year 1985 was going to end without substantial novelties when STET abandoned a tactic of waiting and went on to attack.

What were the reasons? According to the most trustworthy observers there are at least two: GTE Italiana gave over its production to Siemens, which appears again on the Italian market scene. The second is that the Swedish telecommunications multinational, Ericsson, knocked at Fiat's door in order to build up a new company which would be able to join synergically Telettra and Fatme (Italian branch of Ericsson).

At that point, the "Italian pole" fell and quick decisions were needed. Giuliano Graziosi, STET managing director, with Romano Prodi's approval, sped things up and closed the negotiations with IFI [Italian Financial Institute] and Cesare Romiti. Thus, "financial men" became the leaders in the communications field, confirming that in the future this sector will be more and more under the leadership of the big financial enterprises. They are, in fact, the only ones who have the indispensable capital to initiate the take-off of this sector.

Let's examine all details of the operation which will close at the end of 1986 with the birth of a single company.

The marriage of Italtel-Telettra will be accomplished on this basis: 49 percent of shares to STET, 49 percent to Fiat, 2 percent to a bank (perhaps Mediobanca, however, it might be also IMI). The new company will be located in Milan with a corporate capital of 1 billion lire, which could be increased up to 50 billion lire. It will be a financial holding both for control and management.

There is a clear reason for the integration; namely to set up strategies of common utility in the production and marketing of the telephonic and telematic sectors. The company will be engaged especially in public commutation and, principally, in basic telematics, terminals and Pabx electronic plants.

Some details are, however, still dim, even though an initial explanation was given on 6 December, during a meeting of the leaders of this operation at Bocconi University. In particular, it is not yet clear how this corporate union will take place, taking into consideration that the two companies have different weight and dimensions: Italtel has 20,000 people and Telettra 4,600; the invoiced amount of the public enterprises are 1 trillion lire against 403 billion lire of the private company. However, this gap narrows if we look at the profits: 22 billion lire for Italtel, 14 billion lire for Telettra.

One has also to remember that the company, under the leadership of Marisa Bellisario, reached a profit in 1983 after the dismissal of many workers. However, the main problem is still the number of workers that should be thinned out: According to estimates, the total staff should be 13,000 workers in 1989.

However, beyond the different structures of the companies, there is a basic tendency to be complementary in production. In public communications, Italtel now controls 52 percent of the market and 37 percent in the private market. As far as both fixed and herzian hearing transmission is concerned, the two companies can achieve profitable convergences: one by controlling 30 percent and the other 32 percent of the Italian market.

Certainly, the STET choice allows Fiat to penetrate a strategic sector with greater energy by speeding up the productive diversification of the group. On the back of the first Italian pillar a maxigroup is born (at least for the Italian market). This group is bound to emerge and to carry its weight in the collision between the giants which is developing in the second half of the 1980's.

The page is turned with a great reshuffling of cards: 1986 promises to be a year full of sensations. GTE Italiana, in fact, has already expressed its intention to join the new industrial reality, while Olivetti does not at all seem likely to stand aside. At stake are 100,000 billion lire in national plan for telecommunications and the telematics markets are getting richer and richer.

Besides, with the IBM campaign determined to penetrate the European market even in the networks field, new cartels stand out within the EC: The Italian telecommunication pole could further strengthen the already firm ties achieved by Italtel with the German Siemens, the French Cit Alcatel and the British Plessey. There is talk about a German-Italian axis; however, the challenge is still open and only in the coming months will STET and Fiat strategic objectives become apparent. These two are destined to pursue new alliances.

A forecast of events taking shape in the 1990's was given during a recent interview with Sergio Vacca, the director of Iefe, the Research Institute of Bocconi University. The agreement between Fiat and STET is the first piece of a puzzle that will deeply change the telecommunications world. It is an indispensable agreement since the telecommunications sector needs very large investments. For developing a system such as UT/10 [the plants planned by Italtel-Telettra-GTE] 1,500-2,000 billion lire are required: these investments are justified only by large-scale economies. The agreement between STET and Fiat operates in this direction. However, Mr Vacca advises that one has "to take into account also Siemen's Germans and the Americans of GTE, who signed important agreements."

Now Italy (especially STET) seem to be determined to look for a European partner. It is a correct choice, in principle, even though some critics point out that it means surrendering to more favorable agreements with AT&T regarding very advanced technologies. Only time will tell if the right path has been taken. Up to now in an atmosphere of general approval, only one disagreement is recorded, that of trade unions, perhaps worried about its effect on labor, a result of the productivity integration with the rationalization of the tasks between the two companies. In particular, according to FIOM metal-workers, "the public industry must not abdicate in favor of the private industry without a statement of reasons and compensation." Thus, one wonders if a partner of limited dimension such as Telettra would allow such an improvement in quality which is indispensable for STET for its manufacturing section.

On the contrary, in the industrial world there are great expectations for the designation of the new company's leadership. Marisa Bellisario is Ital tel's leader, while President Alessandro Nezzo and managing director Raffaele Palieri lead Telettra. The next board of directors will have seven

members; three of them selected by STET, three by Fiat and one by the minor partner (either IMI or Mediobanca). Obviously, the president will be elected by general agreement.

Beyond the developments inside the company that are still to be seen, it can be confirmed that the most important obstacles have been overcome in order to accept the international telecommunications challenge with courage. It is a huge business in which Italy can play its role. STET and Fiat seem to possess "know-how" and resources in order to be at the top.

8601/8309  
CSO: 5500/2622

ITALY

FOUNDATION HOSTS CONVENTION ON FIBER OPTICS

Milan ELETTRONICA OGGI in Italian No 13, Jan 86 pp 96-97

[Article by L. Fusi: "International Convention on Fiber Optics"]

[Excerpts] The first applications and research in the field of fiber optics date from 1970. Since that time this new information transmission system has surpassed the copper cables system for various reasons. Recently, the Cini foundation--under the sponsorship of the Council of Ministers--introduced the "state of the art" in research and applications during an international convention in Venice at which local authorities and government representatives were present. More than 1,200 researchers and technicians of specialized firms took part in the convention, and for the occasion an exhibition was prepared of the products of some leading Italian firms specializing in this field.

The situation and further applications in Italy are particularly interesting. The role of the CSELT research center of Turin is so important concerning national projects for optical fibers installations that it can be considered as the leader in the sector.

Some labs have already been installed. For example, at the Milan Fair an optics island was recently tested and utilized. This project was developed by SIP together with CSELT, ItalTEL, Pirelli, and Sirti, in cooperation with RAI.

Another operating optics island in Rome connects several telephone centers for a length of 16 km. Also carried out by ASST, the state telephone service company, is the Padua-Mestre connection with a 12 multimode fiber cable 34 km long.

Recently, a 12 fiber cable 4.7 km long was installed in the bay of Venice to connect the Lido with the S. Salvador center.

This application was presented at the international conference as a practical demonstration of existing capabilities. Such a telematic application is able to transmit voice, video images, and at the same time access video libraries.

Also at an advanced stage are the Roma Eur projects for fully digital signal transmissions through this means, and, for connecting the capital with other European cities. Meanwhile, ASST is planning the following programs: the

development of an international, European network, 6,500 km long with a monomode 12 fiber cable; the two-cable Milan-Turin network, one along the railroad and the other along the highway; and the Pisa-Livorno and Catania-Palermo lines. The state of the art in production is of 8 Gbit/s and regeneration to 253 km.

Just to have an idea of the applications it is important to consider that FOS, South Optical Fibers, a joint venture with Pirelli and Sirti, will produce 20,000 km of fiber optics before the end of the year.

Another interesting prospect for 1987, which is not directly linked with Italy, is the installation of a submarine cable to connect Europe and the United States. In the beginning we stated that fiber optics are becoming more important to broadcasting units. Moreover, artificial satellite for telecommunications will be concerned with these advances. In fact, optical fibers will partially replace them, especially in high density connection areas.

As seen earlier, some applications involve the consumer directly. It is certain that broadcasting quality will improve. At present, fiber optics connect one center with another; therefore, they cannot yet reach household units, although this is just a short step away. The considerable benefits that may be drawn and that justify the objectives are the services. In coming years, it will be possible to transmit and receive-video images by telephone, thereby leading to an interactive videophone. It will also be possible to participate in video conferences by telephone, to access video libraries, and to use one or more modes simultaneously. The real difference between fiber optics and cables is in the execution of these applications.

Some forecasts indicate that fiber optics will affect the video recorder market. In fact, it is speculated that, thanks to a low cost/information ratio, it will be more convenient to connect to video banks rather than buy video recorders and recorded programs.

8609/8309  
CSO: 5500/2621

ITALY

SIP TO IMPLEMENT CONFERENCE-CALL CAPABILITY

Rome L'UNITA in Italian 22 Jan 86 p 9

[Article by Daniele Martini]

[Text] Rome--Telephone conversations safe from eavesdropping ears and eyes. A simultaneous hookup of 16 conference rooms scattered around most of Italy enabling a long-distance megaconference among the participants. The transmission of data at a speed six times faster than today's, which is already high. Automatic debiting of the charges to the number called. From now on, it will be possible to do all these things. SIP [Italian Telephone Company] programs for 1986 call for the implementation of these services.

These are the latest advances in a revolution of the telephonic-facilities communications sector, that began in 1968 and has progressed without fanfare, but steadily, over the past few years. Closed user-group, teleaudio conferencing, green number, and 64 Kbits per second are the terms being used by those involved in this Nth technological mini-revolution, to designate the projects which very soon will play a part in the work of banks and offices, newspapers and agencies, industries and universities. The following explanation is offered for a better understanding of what is happening.

Starting with the closed user-group, the term rather adequately suggests its content; namely, the reserving of channels for voice or data transmission interconnections among an "X" number of subscribers. How many times does the need arise to quickly communicate, possibly in real time, information, news items, or figures, which, however, should preferably not be leaked to anyone other than the intended recipient of the call? And how many times do business firms or institutions or banks decline to use the telephonic cables because no one can absolutely guarantee the desired privacy via those facilities?

From now on, the system the SIP has designed should guarantee this communications security. The engineers assure us that the structure that has been adopted is "bombproof." In practice, "unwanted" subscribers are iron-rigidly excluded from the linkup; that is, a kind of "private" network is

established using channels and facilities provided by the public services network. Let us assume a big firm subscribes to this new service in order to have a secure and efficient communications link with its subsidiaries spread throughout Italy. What are the advantages of this service to this firm? For one thing, it pays for a service but is not required to undertake on its own either the investment cost of designing and building the facilities or the ongoing costs of operating them. These are furnished to the firm, in exchange for the payment of a standard fee and of the tariffed charges for the service, of course.

Closed user-group service is configured in such a way that--to remain within the example of the firm with subsidiaries, or of the parent company with various and autonomous affiliated companies--each entity within the group pays according to the use it actually makes of the network. All potential "intruders" remain outside the closed-group, unless it is decided within the group to open it for the occasion. And this can also be done.

Teleaudio conferencing. This service has been in existence, at least in part, for some time. But what is new is that, although until now it has been necessary to lease as many lines as there were locations to be called, in order to have the service, now, with solutions provided by new technologies, only a single "latest-generation" line is used. Another innovation is that, although formerly only two locations could be interconnected at any one time, now up to 16 locations can be interconnected simultaneously. And the voice communication facility can be equipped with other add-on apparatus. For example: Is there need to transmit a document via facsimile? Simply interrupt the voice conversation for 60 seconds while the copy is being transmitted. Or must something be handwritten or drawn to better illustrate what is being said? Anything traced by hand on a board in any one of the 16 locations will be seen reproduced on the video screens in all the other locations.

The term 64 Kbits per second. Here, we are in the midst of language for the initiated. When data are transmitted over a distance, each character is represented by a sequence of bits; for example, eight bits per character. The term 64 Kbits per second means that a number of characters equivalent to 64,000 bits can be transmitted in the space of 1 second; using a very approximate calculation this would be equivalent to about 8,000 characters. If each word contains, on average, 8 characters, approximately 1,000 words can be transmitted during that 1 second. This speed is much faster than present ones. If data are transmitted on telephone lines of the older type, and using the older systems, it is barely possible, and only with considerable difficulty, to attain a speed of 4,800 bits per second. Obviously, this type of service interests mainly those who transmit large quantities of data, figures and information daily. Let us take, for example, the long-distance transmission of the pages of a newspaper. Up to now, 12 basic telephone lines have been used. Now, the two locations can be linked over a single, faster, new-technology line that passes through a switching exchange.

The forward step in this case, as in the others discussed here, has been made possible by the voice-data network, the network that parallels the usual telephone network and is linked to it, but that is served by exchanges of a completely new, electronic type. As of now, 80 Italian cities are being served and 4 new exchanges are in place, in Milan, Turin, Rome and Naples. SIP engineers say that a fifth one is needed in Bologna, but so far there has been no authorization for it; instead, there is the possibility of its becoming an issue for the opening of a polemic.

The subscribers to this new network number around 1,500, still very few as compared with the 13 million subscribers to the "normal" network. But of these 13 million, 3 million are in the "business" category, and it is in this category that SIP plans to attract new subscribers to the voice-data network--in part, because the "traditional model telephone" and this new network are not exactly strangers to each other. A rather interesting example is the integration between the two systems: The green number. For once, ecology has nothing whatever to do with "green"; this time, the color is linked instead to the green traffic light, the green light meaning, in this case, "Talk." When the subscriber uses a certain prefix before a called number, the call is automatically charged to the answering party. In practice, this is of use to a firm wishing to have its customers call it by telephone at virtually no charge to them, except the cost of a token. Why this accommodation? For internal reasons, but also for competitive reasons. For instance, a customer will prefer to place an order with a firm having this service, and therefore at no cost to the customer for the telephoning of his order, rather than with a firm that does not have this system. In the United States, where (as usual) the system has been in operation for almost 20 years, it appears that this is precisely the way it works. In 1986, the "green number" will make its debut in Italy. Will it be well received?

9238  
CSO: 5500/2572

SPAIN

TELEFONICA, PACIFIC TELESIS TO DEVELOP R & D CENTER

Madrid YA in Spanish 19 Jan 86 p 24

[Text] Telefonica [Telephone Company of Spain] and the U.S. multinational, Pacific Telesis, have signed an agreement for the planning, design, and construction of a research and development center in the outskirts of Madrid. The facility, which will have a usable space of 20,600 square meters, will employ about 600 specialists. This will mean doubling Telefonica's present research staff.

The investments required for this project come to a maximum of 6.4 billion pesetas. This amount has been set as the investment ceiling. It will be further itemized in the bidding to be conducted for the construction and supply of equipment and materials. The principal items into which this project can be subdivided are: civil engineering, including special facilities: about 2.7 billion pesetas; equipment: 2.4 billion; and technical assistance, engineering costs, and project management: 1.3 billion pesetas.

Pacific Telesis Involved

Approximately half of the money will be spent in Spain, with the items for staff and technical assistance to be fundamentally payable in dollars. Consequently, the project must be approved by the general division of foreign transactions.

Pacific Telesis will serve as prime contractor for a "turnkey" contract. It has pledged to deliver the center within the period of 28 months. While it will be responsible for supervising and conducting the public bidding, the final decision on awarding the bids will be made by Telefonica. The agreement, in addition to the project management and advice on the purchase of suitable research instruments, will bring a large team of American engineers from Bellcore (Bell Communications Research) labs, who will remain in Spain during the laboratory's first years of operation.

The contract also calls for the collaboration of Pacific Telesis in the selection of international engineers and telecommunications experts, who

will be hired in their respective countries and brought to Madrid so that they may coordinate the various research staffs.

The lab will incorporate intelligent building technology, including energy and safety control systems, and data communications links within the building. The facility will be able to house the chips design center that Telefónica is thinking of installing.

With an annual operating budget of about 5 billion pesetas, the new labs will have modern facilities enabling them to conduct research and development activities in the areas of telecommunications equipment, systems and services, and basic technologies. The design of integrated circuits for specific telecommunications applications, the study of voice and image signals, human factors, artificial intelligence, and operational systems are some of the fields in which this laboratory will work.

#### Coordination with Other Organizations

The activities of this new research and development center will have to be coordinated to the greatest extent possible with official and research support structures, such as the CSIC [Higher Council for Scientific Research, universities, CDTI, and the advisory commission, as well as with Spain's electronics industry,

The Pacific Telesis Group is one of the seven major companies which emerged from the breakup of AT&T. It provides telecommunications services in California--the most highly developed state in the United States--and Nevada. The company is considered a leader in vanguard applications for telecommunications and information technology. Pacific Telesis has approximately 80,000 employees, and sales of \$8 billion. Last year its profits were close to \$900 million.

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SPAIN

NEW SPANISH TELEVISION STATUTE PROPOSED

Madrid ABC in Spanish 28 Jan 86 p 20

[Text] Yesterday the president of the Socialist Parliamentary Group, Eduardo Martin Toval, announced that the bill reforming the statute for RTVE [Spanish Radio and Television] will be sent to the rest of the parliamentary groups today, so that it may be formally presented to the Congress of Deputies within the coming week. Martin Toval also said that the law regulating private television broadcasting will be passed during this legislative session.

Other sources said it is even possible that at next Friday's Council of Ministers' session, the government may give its approval to the bill prepared by the ministry of the presidency. In fact, Javier Solana, the government spokesman and minister of culture, has said on a number of occasions in recent weeks that the socialist executive intends to approve the private television bill before the end of January, so that it may then be discussed in the Congress of Deputies and the Senate and be finally approved during the present legislative session.

During a dinner meeting with journalists, Martin Toval said he supports adopting the German system, rather than the Italian, "which has few channels and is expensive." He said that in his view, there must be two limitations on private television broadcasting: it must not become a television system run by the banks, and operating concessions must be awarded to stations which guarantee that they will produce a minimum of 50 percent of their broadcast material themselves.

Nonetheless, Martin Toval stated that the bill does not stipulate the number of channels that will be allowed, and that these concessions will be handled administratively by the ministry of the presidency or by the general division of social communications media.

In the opinion of the PSOE [Spanish Socialist Workers Party] spokesperson in congress, "the fundamental point about private television broadcasting is that there are more applicants than there are possible channels available." He added that it will cost at least 15 billion pesetas for the startup expenses for one channel, in order to avoid "major frustration hindering pluralism in Spain's broadcasting system."

At his meeting with the press, the socialist parliamentarian again affirmed that the dismissal of Jose Maria Calvino "is not pending at this time," and that the start in effect of the new RTVE statute does not mean that a new director of this agency will have to be appointed. This new statute, whose final version will be drafted today, contains the following new provisions:

- a. The government will propose a candidate for director general of this public agency, who will then have to be approved by two-thirds of the Congress of Deputies in a first round vote, and by a simple majority in the next round. To remove this director, the government will have to justify its decision.
- b. The new Spanish Radio-Television Council will consist of nine members (there are now 12). Of these members, six will be appointed on a proportional basis, according to the representation of each parliamentary group.
- c. The parliamentary control commission for RTVE in congress will consist of 12 deputies (there are now 36) and it will have greater authority.

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NATIONWIDE COMPUTER DATA NET SEEN READY BY 1988

Stockholm DAGENS NYHETER in Swedish 28 Jan 86 p 7

[Text] Every telephone area code in Sweden will have a computerized exchange for domestic and international computer communication over the telephone. A special network system, Infonet, with local service in some 25 countries, will be connected to the computerized exchanges.

This network, which will connect 70 countries, is to be put into operation on 1 February.

"It is the goal of the National Telecommunications Administration that every telephone area code will have its own computerized exchange within 2 to 3 years," says Bo Adolfsson, marketing manager at the National Telecommunications Administration.

Many In Line

The computerized exchange is, simply expressed, a computer guided telephone exchange for the "packaging" and quick transfer of large amounts of data between computers. For a long time Stockholm was alone with such a computerized exchange, but now Gothenburg and Malmo each have one.

Next in line to receive a local computerized exchange are Karlstad, Norrkoping, Sundsvall and Vaxjo. The rate of expansion is one exchange per month and the budget comes to about 200 million kronor over the next two years.

The feature of Infonet is that it is only a so-called carrier service. This means that the network "carries" information directly from the sender to the receiver without any so-called intermediate storage.

The network will certainly be operative, beginning 1 February but will not be in service at full capacity until midyear. Then, the network for Datapak, Datex and Infonet will be interconnected.

"Infonet has precisely those services the National Telecommunications Administration lacked earlier," says Bo Adolfsson. In Sweden, the National Telecommunications Administration will administer connections to customers. It will be possible to connect telexes, computers and computer terminals to the network via set local lines or connections called in. Through Infonet it is estimated that Swedish firms will receive simpler and more secure computer communication, for example, between head offices and subsidiaries abroad.

"Even though the network is new in Sweden, it has been in use internationally for 10 years and is highly reliable," says Ake Ljung, managing director of Interpak. It is monitored 24 hours a day year around and access is close to 99.7 percent, which means that the network is in operation almost continuously. Computer traffic goes via cable or satellite.

#### Cheaper Than Telephone

The network system is perhaps mainly suitable for large export firms. "It is from them one expects the large volumes," says Ake Ljung.

Infonet can be interesting for medium-size and small firms as well. There is actually a special system to system message which can be much cheaper to use than regular telephone calls. For example, in one minute it is possible to send at least ten times the amount of text that one can read for one third of the ordinary telephone charge.

The investment in Infonet was made with DATEMA Information and CSC, Computer Sciences Corporation, from the United States. Through the subsidiary Teleinvest, the National Telecommunications Administration owns 51 percent of the firm Interpak, which is responsible for Infonet in Scandinavia. Interpak, which has stock capital of 8 million kronor, is estimated by Interpak's managing director, Ake Ljung, to receive a turnover of about 100 million kronor within 5 years.

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